

16310 U.S. PTO
030204

PTO/SB/05 (03-01)

Approved for use through 10/31/2002. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

UTILITY PATENT APPLICATION TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. **HSJ920030268US1**

First Inventor **Matthew J. Carey**

Title **MAGNETORESISTIVE SENSOR WITH ANTIFERROMAGNETIC EXCHANGE COUPLED
STRUCTURE HAVING UNDERLAYER FOR ENHANCING CHEMICAL-ORDERING IN THE
ANTIFERROMAGNETIC LAYER**

Express Mail Label No. **EL 995203059 US**

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.
See 37 CFR 1.27.
3. ☒ Specification [Total Pages **14**]
(preferred arrangement set forth below)
 - Descriptive title of the invention
 - Cross Reference to Related Applications
 - Statement Regarding Fed sponsored R & D
 - Reference to sequence listing, a table, or a computer program listing appendix
 - Background of the Invention
 - Brief Summary of the Invention
 - Brief Description of the Drawings (if filed)
 - Detailed Description
 - Claim(s)
 - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets **2**]
5. Oath or Declaration [Total Pages **6**]
 - a. ☒ Newly executed (original or copy)
 - b. ☐ Copy from a prior application (37 CFR 1.63 (d))
(for continuation/divisional with Box 18 completed)
 - i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 CFR 1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

ADDRESS TO:

Assistant Commissioner for Patents
Box Patent Application
Washington, DC 20231

7. ☐ CD-ROM or CD-R in duplicate, large table or Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
 - a. ☐ Computer Readable Form (CRF)
 - b. Specification Sequence Listing on:
 - i. ☐ CD-ROM or CD-R (2 copies); or
 - ii. ☐ paper
 - c. ☐ Statements verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement (when there is an assignee) ☒ Power of Attorney
11. ☐ English Translation Document (if applicable)
12. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☐ Copies of IDS Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503) (Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s) (if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122 (b)(2)(B)(i). Applicant must attach form PTO/SB/35 or its equivalent.
17. ☐ Other: _____

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment, or in an Application Data Sheet under 37 CFR 1.76:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No.: _____

Prior application information:

Examiner: _____

Group Art Unit: _____

For CONTINUATION OR DIVISIONAL APPS only: The entire disclosure of the prior application, from which an oath or declaration is supplied under Box 5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference. The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

19. CORRESPONDENCE ADDRESS

☐ Customer Number or Bar Code Label

(Insert Customer No. or Attach bar code label here)

or ☒ Correspondence address below

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Name (Print/Type)

Douglas R. Millett

Registration No. (Attorney/Agent)

31,784

Signature

[Signature]

Date

3/2/04

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Box Patent Application, Washington, DC 20231.

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FEE TRANSMITTAL for FY 2004

Patent fees are subject to annual revision.

TOTAL AMOUNT OF PAYMENT (\$ 828.00

Complete if Known

Application Number	
Filing Date	
First Named Inventor	Matthew J. Carey
Examiner Name	
Group Art Unit	
Attorney Docket No.	HSJ920030268US1

METHOD OF PAYMENT

1. ☒ The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:
- Deposit Account Number: 502587
- Deposit Account Name: Hitachi Global Storage Technologies
- ☒ Charge Any Additional Fee Required Under 37 CFR 1.16 and 1.17
- ☐ Applicant claims small entity status. See 37 CFR 1.27
2. ☐ Payment Enclosed:
- ☐ Check ☐ Credit card ☐ Money Order ☐ Other

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1001 770	2001 385	Utility filing fee	770.00
1002 340	2002 170	Design filing fee	
1003 530	2003 265	Plant filing fee	
1004 770	2004 385	Reissue filing fee	
1005 160	2005 80	Provisional filing fee	

SUBTOTAL (1) (\$ 770.00

2. EXTRA CLAIM FEES

Total Claims: 21 -20** = 1 X 18.00 = 18.00

Independent Claims: 2 -3** = 0 X 86.00 = 0.00

Multiple Dependent: =

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description
1202 18	2202 9	Claims in excess of 20
1201 86	2201 43	Independent claims in excess of 3
1203 290	2203 145	Multiple dependent claim, if not paid
1204 86	2204 43	** Reissue independent claims over original patent
1205 18	2205 9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$ 18.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code (\$)	Small Entity Fee Code (\$)	Fee Description	Fee Paid
1051 130	205 65	Surcharge - late filing fee or oath	
1052 50	227 25	Surcharge - late provisional filing fee or cover sheet	
1053 130	139 130	Non-English specification	
1812 2,520	147 2,520	For filing a request for ex parte reexamination	
1804 920*	112 920*	Requesting publication of SIR prior to Examiner action	
1805 1,840*	113 1,840*	Requesting publication of SIR after Examiner action	
1251 110	215 55	Extension for reply within first month	
1252 420	216 205	Extension for reply within second month	
1253 950	217 465	Extension for reply within third month	
1254 1,480	218 725	Extension for reply within fourth month	
1255 2,010	228 985	Extension for reply within fifth month	
1401 330	219 160	Notice of Appeal	
1402 330	220 160	Filing a brief in support of an appeal	
1403 290	221 140	Request for oral hearing	
1451 1,510	138 1,510	Petition to institute a public use proceeding	
1452 110	240 55	Petition to revive - unavoidable	
1453 1,330	241 650	Petition to revive - unintentional	
1501 1,330	242 650	Utility issue fee (or reissue)	
1502 480	243 235	Design issue fee	
1503 640	244 310	Plant issue fee	
1460 130	122 130	Petitions to the Commissioner	
1807 50	123 50	Processing fee under 37 CFR 1.17(q)	
1806 180	126 180	Submission of Information Disclosure Stmt	
8021 40	581 40	Recording each patent assignment per property (times number of properties)	40
1809 770	246 370	Filing a submission after final rejection (37 CFR § 1.129(a))	
1810 770	249 370	For each additional invention to be examined (37 CFR § 1.129(b))	
1801 770	279 375	Request for Continued Examination (RCE)	
1802 900	169 900	Request for expedited examination of a design application	

Other fee (specify) _____

*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$ 40.00

SUBMITTED BY

Name (Print/Type)	Douglas R. Millett	Registration No. (Attorney/Agent)	31,784	Telephone	(408) 717-5491
Signature		Date	3/2/04		

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of :
Matthew J. Carey et al. : Group Art Unit: Not Yet Assigned
Serial No. Not Yet Assigned : Examiner: Not Yet Assigned

For: "Magnetoresistive Sensor With Antiferromagnetic Exchange Coupled Structure
Having Underlayer For Enhancing Chemical-Ordering In The Antiferromagnetic
Layer"

Assistant Commissioner of Patents and Trademarks
Alexandria, VA 22313-1450

EXPRESS MAIL CERTIFICATE

I hereby certify that the above paper/fee is being deposited with the United States Postal Service
as _Express Mail Post Office to Addressee_ service in an envelope addressed to the Assistant
Commissioner for Patents and Trademarks, Alexandria, VA 22313-1450 on March 2, 2004.

Express Mail NO.: EL 995203059 US

Person mailing paper/fee: Mary Lou Domenici

Signature  _____